

WHAT IS CLAIMED IS:

1. A pharmaceutical composition comprising a substance that promotes activity of tumor suppressor gene p53 or protein p53.
2. A pharmaceutical composition according to claim 1, wherein the substance that
5 promotes activation of tumor suppressor gene p53 or protein p53 is a substance that inhibits synoviolin expression and/or function.
3. A pharmaceutical composition according to claim 2, wherein the substance that inhibits synoviolin expression and/or function is siRNA or shRNA that targets a gene coding for synoviolin.
- 10 4. A pharmaceutical composition according to claim 3, wherein the gene coding for synoviolin comprises the nucleotide sequence represented by SEQ ID NO:1.
5. A pharmaceutical composition according to claim 3, wherein siRNA targets a part of the nucleotide sequence represented by SEQ ID NO:1.
6. A pharmaceutical composition according to any one of claims 1 to 5 for treating cancer.
- 15 7. A method for activating tumor suppressor gene p53 or protein p53 comprising inhibiting synoviolin expression and/or function.
8. A method for localizing protein p53 to the nucleus comprising inhibiting synoviolin expression and/or function.
9. A method for suppressing cancer comprising inhibiting synoviolin expression and/or
20 function to localize protein p53 to the nucleus.
10. A method according to claim 9 further comprising irradiating protein p53 localized in the nucleus with radiation or ultraviolet.
11. A method according to claim 9 further comprising contacting a cell containing protein

p53 localized to the nucleus with an anticancer agent, or further comprising embolizing a vessel around said cell.

12. A method for phosphorylating a part of amino acid residues of protein p53, comprising inhibiting synoviolin expression and/or function.

5 13. A method according to claim 12, wherein the part of amino acid residues is serine residue at position 15.

14. A method for activating kinase, comprising inhibiting synoviolin expression and/or function.

10 15. A method according to claim 14, wherein the kinase comprises ATM, ATR or an enzyme having a similar activity thereto.

16. A method for inducing expression of protein p21 with activated protein p53, comprising inhibiting synoviolin expression and/or function to activate protein p53.

17. A method for suppressing cancer comprising inhibiting synoviolin expression and/or function to allow protein p53 to induce expression of protein p21.

15 18. A method for activating protein p53, comprising inhibiting synoviolin expression and/or function.

19. A method according to any one of claims 7 to 18, wherein the synoviolin expression is inhibited with siRNA or shRNA that targets a gene coding for synoviolin.

20 20. A method according to any one of claims 7 to 18, wherein the synoviolin function is inhibited by inhibiting functions of synoviolin to bind to and/or ubiquitinate protein p53.

21. A method according to claim 19, wherein the gene coding for synoviolin comprises the nucleotide sequence represented by SEQ ID NO:1.

22. A method according to claim 19, wherein siRNA targets a part of the nucleotide sequence represented by SEQ ID NO:1.